

What is claimed is:

1. An interference reducing circuit comprising:

phase locking means for attaining phase locking to an interference wave having a carrier frequency that is received together with a reception wave by tuning;

level adjusting means for adjusting a level of a phase-locked signal that is output from the phase locking means; and

subtracting means for subtracting the level-adjusted, phase-locked signal from the reception wave.

2. The interference reducing circuit according to claim 1, wherein the phase locking means comprises:

a voltage-controlled oscillator for producing a signal having a frequency that is varied by voltage control;

phase comparing means for comparing phases of an output of the voltage-controlled oscillator and the interference wave; and

a feedback circuit for feeding back, as a control voltage for the voltage-controlled oscillator, via a second-order loop filter, a phase error signal that is detected by the phase comparing means.

3. The interference reducing circuit according to claim 1, wherein the level adjusting means comprises a first-order loop filter and adjusts the level of the phase locked signal based on a level of a signal that is produced by the subtracting

means.

4. The interference reducing circuit according to claim 2, wherein the interference wave is an amplitude-modulated or frequency-modulated carrier, and wherein a loop characteristic of the phase locking means is so set as to follow an amplitude modulation component or a frequency modulation component.

5. A TV receiver comprising:

receiving means for receiving a transmitted broadcast including video or audio information;

an A/D converter for converting, into digital information, a video or audio signal received by the receiving means;

a signal processing circuit for demodulating the digital information of the video or audio information that is output from the A/D converter;

phase locking means for attaining phase locking to interference wave information that is mixed in the digital information that is output from the A/D converter;

level adjusting means for adjusting a level of the interference wave information to which phase locking is attained by the phase locking means; and

subtracting means for subtracting the level of the interference wave information obtained by the level adjusting means from the video or audio information.

6. The TV receiver according to claim 5, wherein the phase locking means attains locking to an interference wave frequency

signal that is video carrier information or audio subcarrier information of another analog TV reception wave that is set in the same channel as the broadcast.

7. The TV receiver according to claim 6, wherein the phase locking means comprises:

a sinusoidal information signal generating section for generating a signal having a phase that is varied in accordance with control information;

phase comparing means for comparing phases of an output of the sinusoidal information signal generating section and the interference wave; and

a feedback circuit for feeding back, as a control voltage for the sinusoidal information signal generating section, via a second-order loop filter, a phase error signal that is detected by the phase comparing means.

8. The TV receiver according to claim 5, wherein the level adjusting means comprises a first-order loop filter and adjusts the level of the interference wave based on a level of a signal produced by the subtracting means.